

U SHENKO, I K.

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4447

Author : Ushenko, I.K.

Title : Investigation of the Chemistry of Cyanine Dyestuffs.
XII. Thiacyanines from Derivatives of 1,4-Diben-
zothiazolybutane.

Orig Pub : Ukr. khim. zh., 1956, 22, No 1, 76-79

Abstract : There have been synthesized 8,10-dimethylene-thiacyanines (I) in order to investigate the correlation between absorption maximum (λ_{max}) and the N-substituents. By interaction of 1,4-dibenzothiazolybutane (II) with the corresponding RX (III) were prepared the bi-quaternary salts (IV) which on condensation with $CH(OC_2H_5)_3$ give I (yield 14-50%). Replacement of $R = C_2H_5$ in I by $iso-C_3H_7$, $n-C_4H_9$, $iso-C_4H_9$, β - C_4H_9 and β - $C_4H_9OC(=O)CH_3$, causes a bathochromic

Card 1/5

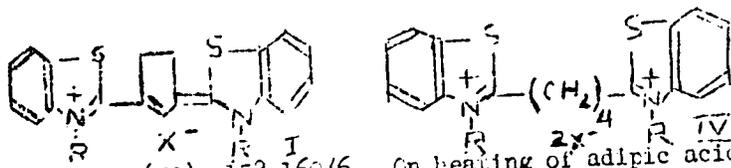
- 87 -

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4447

shift of AM by 4-9 m μ . By interaction of the corresponding alcohol, p-CH₃C₆H₄SO₂Cl and KOH (powder) in absolute ether, are obtained p-CH₃C₆H₄SO₂R (V) (listing R, BP in $^{\circ}$ C/mm): n-C₃H₇ (Va) 155-158/7; iso-C₃H₇ (Vb), 153-154/7 (decomposes); n-C₄H₉ (Vc), 164-166/6;



iso-C₄H₉ (Va), 158-160/6. On heating of adipic acid with o-NH₂C₆H₄SH in sealed tube (175-180 $^{\circ}$) there is

Card 2/5

- 88 -

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4447

obtained II, MP 105-106° (from alcohol). 2 g II, 1.84 g BrCH₂CH₂OH (20% excess) heated at 105-108° (16 hours, sealed tube). Obtained IV (R = beta-C₂H₄OH, X = Br), yield 71%, MP 266° (decomposes; from water). From 2 g II and 2.6 g Va at 125-130° (12 hours) is obtained IV (R = n-C₃H₇, X = p-CH₃C₆H₄SO₃), yield 79% (af-

ter heating at 130°). Analogously from 2 g II and 2.6 g Vb is obtained IV (R = iso-C₃H₇, X = p-CH₃C₆H₄SO₃),

yield 52%; from 4 g II and 5.3 g Vc -- IV (R = n-C₄H₉, X = p-CH₃C₆H₄SO₃), yield 52%; from 4 g II and 5.3

g Vd at 135-145° (20 hours) is obtained IV (R = iso-C₄H₉, X = p-CH₃C₆H₄SO₃), yield 42%. From 2 g II and 1.7 g

BrCH₂COOH in a tube (120°, 8 hours) is obtained IV

Card 3/5

- 89 -

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4447

(R = CH₂COOH, X = Br), yield 67%, MP 235° (decomposes; from water); from 1.7 g II and 1 g ClCH₂COOCH₃ (120°, 15 hours) is obtained IV (R = CH₂COOH, X = Cl), yield 23%, MP 218° (decomposes);² from 1 g II and 1 g BrCH₂COOCH₃ (105-108°, 15 hours)

is obtained IV (R = CH₂COOH, X = Br), yield 45%, MP 281° (decomposes; from water);³ from 2 g II and 2.4 g BrCH₂CH₂OCOCH₃ (105-110°, 15 hours) -- IV (R = CH₂CH₂CO-

CH₃, X = Br), yield 32%, MP 204° (decomposes; from water). Boiling IV with HC(CC₂H₅)₃ in (CH₃CO)₂O and precipitation with KI are obtained

I (X = I) (listing R, duration of the reaction in minutes, yield in %, MP in °C (solvent), AM mmc): n-C₃H₇, 17, 14, 225 (decomposes; from alcohol), 601 (dibromide MP 236°); iso-C₃H₇, 15, 21, 215 (decomposes; from alcohol), 605;

Card 4/5

- 90 -

USSR/Organic Chemistry - Synthetic Organic Chemistry

E-2

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4447

$n\text{-C}_4\text{H}_9$, 20, 32, 216 (decomposes; from alcohol), 610;

iso- C_4H_9 , 20, 21, 203 (decomposes; from alcohol), 607;

$\text{CH}_2\text{CH}_2\text{OCOCH}_3$ (from IV, $\text{R} = \text{CH}_2\text{CH}_2\text{OH}$), 20, 50, 222 (decomposes; from alcohol), 609 (from IV, $\text{R} = \text{CH}_2\text{CH}_2\text{OCOCH}_3$, 25, 49); CH_2COOH , 20, 15, 198 (decomposes), 603; $\text{CH}_2\text{COOCH}_3$, 10, 20, 210 (decomposes; from alcohol), 598. 0.5 g IV ($\text{R} = \text{CH}_2\text{CH}_2\text{COOCH}_3$, $\text{X} = \text{Br}$), heated (tube

110-115°, 2 hours) with 1.5 ml 42% HBr. There is obtained after precipitation with KI I ($\text{R} = \text{CH}_2\text{CH}_2\text{OH}$, $\text{X} = \text{I}$), yield 50%, MP 245° (decomposes; from alcohol), AM 605 mmc. III ($\text{X} = \text{I}$) do not readily yield IV.

Card 5/5

- 91 -

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1.4
65-4°. The former treated in EtOH with 3% H₂O₂ gave in 10 hrs. 10% $PM(ENH)Cl_2 \cdot S_2$, m. 123-6°; similarly was prept. (5.2- $PM(ENH)Cl_2 \cdot S_2$, m. 124-5°) 1 (3.2 g.) in C₆H₆ with 1.5 g. H₂O₂ heated to boiling for 10 min. pot. watch being used. with a jacket of 60% 2-mercaptoethanol.

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"APPROVED FOR RELEASE: 03/14/2001

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APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001858120020-4"

AUTHORS: Ushenko, I. K.; Gornostayeva, S. Ye. SOV79-28-6-53/63

TITLE: Investigations in the Field of the Chemistry of Cyanine Dyes (Issledovaniya v oblasti khimii tsianinovykh krasi-teley) XIII. Thiocyanines Having Unsaturated Radicals in the 6,6'-Positions of Benzthiazole (XIII. Tiatsianiny, soder-zhashchiye v kachestve zamestiteley v 6,6'-polozheniyakh benzthiazola nepredel'nyye radikaly)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1668-1677 (USSR)

ABSTRACT: In the present paper the synthesis of the thiocyanines con-taining unsaturated radicals (styryl, p-methoxystyryl and α -thienylvinyl) in the 6,6'-positions of benzthiazole is mentioned. It was assumed that the introduction of unsaturat-ed radicals into the benzthiazole nuclei of the dye would lengthen the chromophore and deepen the color of the thia-carbocyanine. Cyanine dyes of such a type have hitherto been unknown. The initial bases were synthesized according to Meerwein (Meerveyn) by conversion of the diazotized 2-methyl-6-aminobenzthiazole with unsaturated acids. Heterocyclic diazo compounds have hitherto not been converted with un-

Card 1/3

SOV79-28-6-53/63

Investigations in the Field of the Chemistry of Cyanine Dyes. XIII. Thiacyanines Having Unsaturated Radicals in the 6,6'-Positions of Benzthiazole

saturated compounds. The authors primarily used an amine of the series of benzthiazole, viz. the 2-methyl-6-aminobenzthiazole. In the conversion of this diazotized compound with cinnamic-, p-methoxycinnamic- and α -thienylacrylic acid according to Meerwein (Ref 1) three new bases of the 2-methylbenzthiazole derivatives were obtained which contain the unsaturated substituents in position 6. The synthesis of the 2-methyl-6-styrenebenzthiazole illustrates the mentioned scheme. In Table 1 the new synthesized bases are mentioned. The three new synthesized bases are: 2-methyl-6-styrylbenzthiazole, 2-methyl-6-(p-methoxystyrene)-benzthiazole and 2-methyl-6-(α -thienylvinyl)-benzthiazole. From these bases and the ethyl ester of the p-toluene-sulfo acid quaternary salts with unsaturated substituents in the position 6 of benzthiazole were obtained. The introduction of unsaturated substituents into the position 6 of the molecule of the cyanine dye abruptly shifts the absorption maximum into the spectral range of long waves. There are 4 tables and 17 references, 2 of which are Soviet.

Card 2/3

SOV79-28-6-53/63

Investigations in the Field of the Chemistry of Cyanine Dyes. XIII. Thiacyanines Having Unsaturated Radicals in the 6,6'-Positions of Benzthiazole

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainsskoy SSR
(Institute of Organic Chemistry, AS Ukr SSR)

SUBMITTED: March 5, 1957

1. Phthalocyanines--Synthesis

Card 3/3

AL'PEROVICH, M.A.; USHENKO, I.K.; TYURINA, L.N.

Synthesis of thiocarbocyanines with unsaturated radicals as
constituents. Zhur.ob.khim. 28 no.9:2538-2547 S '58. (MIRA 11:11)

1. Filial nauchno-issledovatel'skogo kinofotoinstituta i Institut
organicheskoy khimii AN USSR.
(Thiocarbocyanine)

5 (5)

AUTHORS:

Al'perovich, M. A., Miroshnichenko, Z.I. SOV/79-29-3-51/61
Ushenko, I. K.

TITLE:

Synthesis of the Thiocarbocyanines From the 5-Substituted
2-Methyl-6,7-tetramethyl-benzothiazoles (Sintez tiakarbotsian-
inov iz 5-zameshchennykh 2-metil-6,7-tetrametilbenztiazole)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 989-997 (USSR)

ABSTRACT:

The synthesis of the 3,3'-diethyl-6,7,6',7'-bis-(tetramethylene)-
thiocarbocyanines which contain methoxy groups in the positions
5,5' (Scheme 1) is described in the present paper.
(See references 1, 2).

Furthermore, 6,7,6',7'-bis-
(tetramethylene)-thiocarbocyanines were synthesized with nitro-,
acetamino-, and oxy groups in the heteroesters. The synthesis
of the initial base was carried out according to scheme 2.
After the nitration of (I) the formation of two isomers (II)
and (III) was to be expected. The nitroproduct separated
from the reaction mass melted at 92-103°. Two products were
obtained by fractioned re-crystallization from alcohol, one
with the melting point 139-140° (yield 32%), the other one
with the melting point 96-97° (19.6%). The nitration was
carried out at -5° as at higher temperatures a resinification

Card 1/3

Synthesis of the Thiocarbocyanines From the 5-
Substituted 2-Methyl-6,7-tetramethyl-benzothiazoles

SOV/79-29-3-51/61

takes place. Ye. D. Sych proved that the position of the introduced acetamino groups influences the depth of color of the thiocarbocyanine and displaces also the absorption maxima. Thus thiocarbocyanines were synthesized from the nitro compounds (II) and (III); amines and their acetyl derivatives were obtained by the reduction of these cyanines, the latter were transformed into quaternary salts and dyes (Scheme 3). From the comparison of the absorption maxima of the synthesized dyes (Table 1) with the data obtained by Sych (Ref 8) we may conclude that the isomer melting at 96-97° is the compound (II), the isomer melting at 139-140° the compound (III). The substitution of the amino group by the oxy group in the series of benzothiazole was successful over the diazo compounds. The absorption maxima of the thiocarbocyanines are given in table 3. There are 3 tables and 5 references, 4 of which are Soviet.

ASSOCIATION: Filial nauchno-issledovatel'skogo kinofotoinstituta na fabrike
Nr 3 i Institut organicheskoy khimii Akademii nauk Ukrainskoy
SSR (Branch of the Motion Picture and Photography Scientific
Research Institute of Plant No 3 and Institute of Organic

Card 2/3

Synthesis of the Thiocarbocyanines From the 5-
Substituted 2-Methyl-6,7-tetramethyl-benzothiazoles

S07/79-29-3-51/61

Chemistry of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: January 27, 1958

Card 3/3

USHENKO, I.K.

Cyanine dyes with unsaturated substituents. Part 7: Thiacyanines having β -cyanovinyl radicals in the benzothiazole nuclei. Zhur. ob.khim. 30 no.8:2650-2657 Ag '60. (MIRA 13:8)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Thiacyanines)

USHENKO, I.K.; CHOVIK, L.I.

Chemistry of cyanine dyes. Part 15: Cyanine dyes containing
phthalimide groups as substituents. Zhur.ob.khim. 30 no.8:
2658-2664 Ag '60. (MIRA 13:8)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Cyanine dyes)
(Phthalimide)

USHENKO, I.K.; CHOVIK, L.I.

Chemistry of cyanine dyes. Part 16: Biscyanines. Zhur.ob.khim.
30 no.8:2665-2669 Ag '60. (MIRA 13:8)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Cyanine dyes)

AL'PEROVICH, M.A.; NAUMOV, Yu.A.; USHENKO, I.K.

Cyanine dyes with unsaturated substituents. Part 8: Cis-trans isomerism of thiacyanines with styryl substituents in the benzothiazole nuclei. Zhur. ob. khim. 31 no.4:1344-1356 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Cyanine dyes)

USHENKO, I.K.

Cyanine dyes with unsaturated substituents. Part 9: Carbocyanines
and merocyanines containing phenylacetylonyl radicals. Zhur.ob.khim.
31 no.9:2854-2861 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Cyanines)

USHENKO, I.K.

Chemistry of cyanine dyes. Part 17: Synthesis of arylbenzothiazoles
and the preparation of thiacyanines from them. Zhur.ob.khim.
31 no.9:2861-2869 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Benzothiazole) (Cyanines)

USHENKO, I.K.

Chemistry of cyanine dyes. Part 18: Condensation of aromatic and alicyclic ketones with quaternary salts of 2-methylbenzothiazole, and the transformation of obtained compounds into cyanine dyes. (MIRA 14:9)
Zhur.ob.khim. 31 no.9:2869-2876 S '61.

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Ketones) (Benzothiazole) (Dyes and dyeing)

TYURINA, L.N.; AL'PEROVICH, M.A.; USHENKO, I.K.

Cyanine dyes with unsaturated substituents. Part 10: 6-styrylthiamero-
cyanines and rhodacyanines with substituents in the polymethine
chain. Zhur. ob. khim. 32 no.1:70-76 Ja '62. (MIRA 15:2)

1. Filial nauchno-issledovatel'skogo kinofotoinstituta i Institut
organicheskoy khimii AN Ukrainskoy SSR.
(Cyanines)

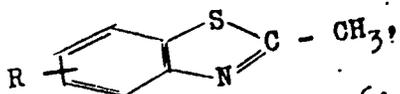
S/079/62/032/011/006/012
D204/D307

AUTHORS: Ushenko, I.K., Rodova, F.Z., and Korystov, V.I.

TITLE: Cyanine dyes containing unsaturated substituents.
XI. Thiacyanines containing dimethyl-, diphenyl-,
and carboxyvinyl radicals in the benzothiazole ring

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 11, 1962;
3650 - 3656

TEXT: Compounds

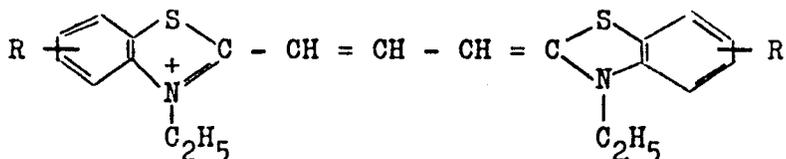


where R is I: HOOC.CH = CH in position 6; II: HOOC.CH = CH in posi-
tion 5; III: HOOC.CHCl.CH₂; IV: CH₃OOC.CH = CH; V: (CH₃)₂ C = CH;
VI: (C₆H₅)₂ C = CH; VII: C₆H₅CH = C C₆H₅, (substituents in III-VII
in position 6), were prepared for the first time, in 5-70 % yields,
I and II were synthesized by heating the corresponding 2-methyl-(5

Card 1/3

S/079/62/032/011/006/012
 Cyanine dyes containing unsaturated ... D204/D307

or 6)- β -cyanovinylbenzthiazoles with conc. HCl, for 4 hrs. at 100°C. IV was prepared by esterifying I in the usual way. Compound III resulted (together with I) from the heating of 2-methyl-6-(β -chloro- β -cyanoethyl)-benzothiazole with conc. HCl. To prepare V, 2-methyl-6-aminobenzothiazole was diazotized and reacted with β, β -dimethylacrylic acid/acetone/Na acetate/CuCl₂, at 20°C for 4 hrs. VI, VII and VIII (2-methyl-6-[β -benzothiazolyl-(2)-vinyl]-benzothiazole) were prepared in a similar manner, using β, β -diphenylacrylic, α -phenylcinnamic and β -(2-benzothiazolyl)-acrylic acids. UV spectra of these compounds showed conjugation of the heterocyclic rings and the unsaturated substituents. New compounds



were also prepared, where R is IX: HOOC.CH = CH in positions 5; X: HOOC.CH = CH in positions 6; XI: CH₃COOCCH = CH; XII: HOOC.CHCl.CH₂

Card 2/3

Cyanine dyes containing unsaturated ... S/079/62/032/011/006/012
D204/D307

XIII: $(\text{CH}_3)_2\text{C} = \text{CH}$; XIV: $(\text{C}_6\text{H}_5)_2\text{C} = \text{CH}$ (substituents in XI-XIV in positions 6). These were synthesized by heating I-VI with diethyl sulfate or ethyl p-toluenesulfonate. The quaternary salts were then converted into dyes. Displacement of the uv absorption maximum in relation to the position of the maximum in thiocarbocyanine ($\text{R} = \text{H}$) was greatest for XIV (41 mu). S.Ye. Gornostayeva assisted in the preparation of VIII. There are 2 tables.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry, Academy of Sciences of the Ukrainian SSR)

SUBMITTED: November 20, 1961

Card 3/3

S/079/62/032/011/007/012
D204/D307AUTHORS: Ushenko, I.K., and Zhikhareva, K.D.TITLE: Investigations of the chemistry of cyanine dyes. XIX.
BenzothiazolythiacyaninesPERIODICAL: Zhurnal obshchey khimii, v. 32, no. 11, 1962,
3656 - 3661

TEXT: 2-methyl-6- and 2-methyl-5-[benzothiazolyl-(2)]- benzothiazoles (I and II) were prepared by treating the acid chlorides of 2-methyl-benzothiazole-6- and 2-methyl-benzothiazole-5-carboxylic acids (in benzene) with *o*-aminothiophenol in benzene, boiling for 1 hr. at 100°C. The compounds exhibited absorption maxima at 220 - 240 and 310 - 320 μ (k-bands). The corresponding monoquarternary salts (III and IV) were prepared by heating I and II with ethyl *p*-toluenesulfonate at 155 - 160°C over 6 hrs. and were then converted to thiacyanine dyes. Thus 3,3'-diethyl-6,6' and 3,3'-diethyl-5,5'-di[benzothiazolyl-(2)] - thiacyanine-*p*-toluenesulfonates (V and VI) were prepared by boiling III and IV with ethyl orthoformate and pyridine for 30 min. 3-ethyl-5- {3'ethyl-6'- and 3-ethyl-5-
Card 1/2

Investigations of the chemistry of ...

S/079/62/032/011/007/012
D204/D307

{3'-ethyl-5'- [benzothiazolyl-(2'') - benzothiazolinilidene-2'] - ethylidene} - thiazolidinthione-2-one-4 (compounds VII and VIII) were prepared by dissolving III and IV in absolute ethanol and boiling for 30 minutes at 100°C with 3-ethyl-5-(acetanilidomethylene)-rhodanine and triethylamine. Compounds IX, 2-(p-dimethylaminostyryl)-6-[benzothiazolyl-(2)] benzothiazole ethyl p-toluenesulfonate, was synthesized by boiling III for 20 min. with p-dimethyl-aminobenzaldehyde and acetic anhydride. Substitution of benzothiazolyl radicals into 5,5' and 6,6'-positions caused considerable shifts of the absorption maxima in the direction of longer wavelengths, the effect being stronger for 6,6'-substituted thiocarboxyanines. Alcoholic solutions of thiocarboxyanines containing 5,5' or 6,6'-substituted benzothiazole radicals fluoresce more strongly than the very strongly fluorescent 6,6'-distyrylthiocarboxyanines. There is 1 figure and 1 table. ✓

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainiskoy SSR (Institute of Organic Chemistry, Academy of Sciences of the Ukrainian SSR)

SUBMITTED: November 20, 1961

Card 2/2

USHENKO, I.K.; RODOVA, F.Z.; KORYSTOV, V.I.

Cyanine dyes with unsaturated substituents. Part 11:
Thiacarbocyanines containing dimethyl-, diphenyl-, and
carboxyvinyl radicals in their benzothiazole nuclei.
Zhur.ob.khim. 32 no.11:3650-3656 N '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN UkrSSR.
(Cyanine dyes) (Thiacarbocyanine)
(Substitution (Chemistry))

USHENKO, I.K.; ZHIKHAREVA, K.D.

Chemistry of cyanine dyes. Part 19: Benzothiazolylthiacyanines.
Zhur.ob.khim. 32 no.11:3656-3661 N '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN UkrSSR.
(Cyanine dyes) (Thiacarbocyanine)

USHENKO, I.K.

AID 985

Entire

28

POLYMER DYES CONTAINING FERROCENE RADICALS (USSR)

Ushenko, I. K., K. D. Zhikhareva, and F. Z. Rodova. Zhurnal obshchey khimii, v. 33, no. 3, Mar 1963, 798-804. S/079/63/033/003/003/005

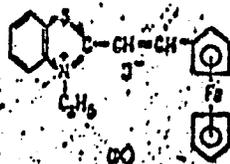
The following new compounds have been synthesized: 2-methyl-6- (I) (mp, 155°C) in 9.5 to 21.7% yields and 2-methyl-5-ferrocenylbenzothiazole (II) (mp, 185°C) in 14 to 27% yields; and bis(2-methyl-6- (III) (mp, 240°C) in an 0.3% yield and bis(2-methyl-5-benzothiazolyl)ferrocene (IV) (mp, 261°C) in an 0.8% yield. The synthesis was accomplished by the reaction of ferrocene with the 1) (dimethyltriazeno)benzothiazoles, 2) benzothiazolyldiazonium chlorides, or 3) benzothiazolyldiazonium acetates

1/3

POLYMETHINE DYES CONTAINING FERROCENE RADICALS (USSR)

AID 985

at the Kiyev Branch of the Donetsk Institute of Soviet Trade and the Institute of Organic Chemistry of the Ukrainian Academy of Sciences.



The reaction mechanism is probably of the free-radical type because 2-methylbenzothiazole and N_2 gas were formed in all three cases. The UV spectra of I, II, III, and IV contained a band in the 400 to 500-m μ range. Compounds I, II, III, and IV were converted to the quaternary salts from which in turn the following thiocarbocyanines and dimethylmerocyanines were synthesized; 3, 3'-diethyl-6, 6'- (V) and 3, 3'-diethyl-5,

5'-diferrocenylthiacarbocyanine iodide (VI); and 3-ethyl-5-(3-ethyl-6- (VII) and 3-ethyl-5-(3-ethyl-5-ferrocenylbenzothiazolinyldene-2-ethylidene)2-thiazolidine-thione-4-one (VIII). The optical and photographic properties of V, VI, VII, and VIII were studied to determine 1) their possible use as photosensitizers and 2) the degree of conjugation of the 5 or 6-ferrocenyl substituents in the benzothiazole ring with the basic polymethine chromophores. The absorption maxima of V, VI, VII, and VIII were at 608, 592, 543, and 535 m μ , respectively, indicating that the

2/3

POLYMETHINE DYES CONTAINING FERROCENE RADICALS (USSR)

AID 985

Maxima in these compounds shifted toward long wavelengths with respect to the thiocarbocyanines and merocyanines containing no ferrocenyl substituents. A greater bathochromic shift occurred in the case of thiocarbocyanines containing 6, 6'- than in those with 5, 5'-ferrocene substituents. Compounds V, VI, VII, and VIII are stable dyes, soluble in alcohol and benzene, and differ little in properties from the unsubstituted thiocyanines. In addition, condensation of formylferrocene with 3-ethyl-2-methylbenzothiazolium iodide formed the deep colored dimethine dye (IX) [see illustration], which shows absorption maxima at 405 and 601 m μ . The deep color of IX was attributed to positive-charge transfer to the methine groups and to the cyclopentadienyl rings.

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OK
3/3

USHENKO, M.

USSR/Miscellaneous

Card 1/1

Author : M. Ushenko, Acting Representative of the Ministry of Communications of USSR in Ukraine

Title : Radiofication of Ukraine

Periodical : Radio. 5, 5 - 6, May 1954

Abstract : In connection with the tercentenary of the annexation of Ukraine by Imperial Russia (in 1654), the author reviews the progress of Ukraine in the field of radio, television, and telephone communications for the last 30 years. New radio stations and ATS (Automatic Telephone Stations), built in various Ukraine regions and in Kolkhoses (Collective Farms), are referred to and the number of new radio centers, constructed in the Ukraine in 1953, is given.

Institution :

Submitted :

1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES

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Application of the Strecker reaction to the synthesis of hydroxyalkylamino acids. M. K. Ushenko. *Ukrain. Khim. Zhur.* 13, 6-9(1938). Reaction by the Strecker method of cyclohexanone and 2-amino-3-methyl-3-butanol yielded hydroxyisomylaminohexahydrobenzoic acid, m. 294-8°. The compl. should be of pharmaceutical interest because of its similarity to stovaine and tucocaine.
B. Z. Kamich

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBLIVM

GROUPS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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USHENKO, N. K.

"Replacement in the azolidine ring", (Report 1): N.M. Turkevich and I.M. Kuz'mak,
"The condensation of rhodaine with ketones". (Report 2): N.M. Turkevich, N.K. Ushenko,
and I.M. Kuz'mak, "The character of individual atoms and of groups within the rhodanine
molecule", Ukr. khim, zhurnal, Vol. KIX, Issue 2 1949, p. 122-30,--Bibliot: p. 125,130.

SO U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949)

USHENKO, N. K.

substitution in the oxolidine ring. V. Preparation of 2-thiono-4-oxazolidinones and its transformations. N. K. Ushenko and T. E. Gordzda (Lvov Inst. Med.). *Chem. Zvezd. Ser.* 16, 545-51 (1950) (in Russian); cf. *ibid.* 14, No. 2 (1948); 16 459-64 (1950).—To 65 g. KCN and 97 g. KCNS ground in little H₂O was added 31 ml. 37% HCHO and 2 moles 30% HCl, the mixt. left overnight, filtered, and the filtrate refluxed 1.5 hrs. on a steam bath and extd. with Et₂O, yielding 47.9% 2-thio-4-oxazolidinone (I), m. 113°. This gives a weak SH test in 10% NH₄OH or Na₂CO₃ with Na nitroprusside; in 10% NaOH the test is strong. Refluxed with aq. Ba(OH)₂ 3 hrs., I gave some H₂S and considerable CNS ion; the soln. contained HOCH₂CO₂H. I with PhNHNH₂ in EtOH gave some H₂S even in the cold, and after heating on a steam bath yielded 92.5% C₆H₅ON, m. 162° (from AmOAc), apparently not a phenylhydrazone of I but a cyclic anhydride. I (2.34 g.), 10 ml. AcOH, 2 g. dry NaOAc, and 3.2 g. BzH refluxed 1 hr. gave 72.5% 5-benzylidene deriv. (II), m. 188° (from EtOH), which, heated with NaOH, gave a strong violet color, with nitroprusside; refluxed with Ba(OH)₂ 4 hrs., it liberated much CNS ion, with some H₂S, and PhCH₂COCO₂H, m. 150°, was isolated. Refluxing II with PhNHNH₂ in EtOH gave a yellow product, C₁₄H₁₁ON, m. 167°. I heated with o-HOC₆H₄CHO, NaOAc, and AcOH gave 89% 5-(o-HOC₆H₄CH₂) deriv., m. 202° (from EtOH). Similarly were obtained 86% 5-(PhCH₂CHCH₂) deriv., m. 178°, 95% 5-(p-MeOC₆H₄CH₂) deriv., m. 192°, and 78.8% 5-(p-Me₂NC₆H₄CH₂) deriv., m. 232°. All heated with aq. NaOH gave the SH test. VI. Synthesis and properties of 5-aryl- and 5-dialkyl-2-thiono-4-oxazolidinones. *Ibid.* 552-7.—To 39.5 g. KCN and 48.5 g. KCNS in a little H₂O was added with cooling 63 g. BzH, then 2 moles 30% HCl over 45 min. and the mixt. heated on a steam bath 1 hr., dil'd. with H₂O, and cooled, yielding 64% 5-phenyl-2-thio-4-oxazolidinone (I), m. 130° (from H₂O); boiled with aq. NaOH it shows a strong SH reaction with

nitroprusside. I heated with PhNHNH₂ in EtOH until H₂S evolution stopped gave 53% product, m. 161°, identified as the phenylhydrazone of I. KCN and KCNS with Me₂CO with slow addn. of 30% HCl gave 62% 5,5-dimethyl-2-thio-4-oxazolidinone, m. 151°, which with PhNHNH₂ in EtOH yielded the phenylhydrazone, m.p. not stated. MeEtCO similarly gave 5-methyl-5-ethyl analog, yielding with PhNHNH₂ 60% phenylhydrazone, m. 164°. The phenylhydrazones begin to form in this series even in the cold, with copious evolution of H₂S. VII. Condensation of rhodanine with esters of β-keto acids and with cyclic ketones. B. M. Turkevich and N. M. Turkevich. *Ibid.* 553-63.—Rhodanine (I) condenses with poorly reactive keto deriva. in sealed tubes at 130-60°. I (1.33 g.), 1.95 g. AcCH₂CO₂Et, 10 ml. AcOH, and 2 g. NaOAc heated in a sealed tube 5 hrs. at 140-5° gave much CO₂ and a trace of H₂S. Dila. gave the 6-(Al₂C₆) deriv. of I, C₁₁H₁₁ONS, m. 190-2°. Similarly 6-(Al₂C₆) deriv. of I, C₁₁H₁₁ONS, gave a mixt. which on extn. AcCH(CH₂CH₂CH₂)CO₂Et gave a mixt. which on extn. with Et₂O and treatment with alc. AgNO₃ yielded the Ag salt of the 5-(CH₂:CHCH₂CH₂CM₂) deriv. of I; the Hg salt was obtained similarly from HgCl₂. 3-Phenylrhodanine (II) with AcCH(CH₂CH₂CH₂)CO₂Et gave the Ag and Hg salts of the 5-(CH₂:CHCH₂CH₂CM₂) deriv. of II. I similarly heated with PhCH(CH₂AcCO₂Et) gave the 5-(EtO)CCHAcCHPhCH₂CM₂ deriv. of I, decomp. above 100°, which, refluxed 20 min. in dil. NaOH, then acidified with HCl, gave AcCH(CO₂Et)CHPhCH₂CHMe(CS)CO₂H, decomp. above 160°. I heated with AcC(CHOEt)CO₂Et 3 hrs. gave the 5-(AcCH₂CH₂) deriv., decomp. above 160°. I (1.33 g.) similarly refluxed with 1.47 g. cyclohexanone, 10 ml. AcOH, and 1.5 g. NaOAc 5 hrs. gave on dila. 1 g. 5-cyclohexylidenerhodanine, m. 170° (from EtOH). II heated with the above reagents in sealed tubes 5 hrs. to 130-6° gave 5-cyclohexylidene deriv. of II, m. 120-2°. Cyclopentanone with I gave 5-cyclopentylidenerhodanine, m. 195.5-6.5° (decompn.). Refluxing I with citral, NaOAc, and AcOH 5

hrs. gave (from 1.33 g. I) some 0.6 g. orange 6-citrylidene-rhodanine [5-(3,7-dimethyl-2,9-octadienylidene)rhodanine,] m. 140° (from EtOH); II gave the 6-citrylidene deriv., m. 101-2°.

VIII. Characteristic reactions of thiazolidines. N. M. Turkevich and M. P. Makukha (Lvov Med. Inst.). *Ibid.* 648-61—Substituted rhodanines (23 examples) were tested for color reactions with several common metal ions, by mixing alc. solns. of the rhodanine deriv. with FeCl₃, CuSO₄, NiSO₄, AgNO₃, and Na₃Fe(CN)₆NO, resp. (the latter reagent gave the best results with NaOH or EtONa added to the mixt.); with rhodanine (I) and its derivs. (substituents given) the results were: H, —, green, —, yellow, red-violet; 5-Me, —, green, —, yellow, red-violet; 3-Me, —, red, red, brown, blue-red; 3-Ph, —, red, red, yellow, blue-violet or red; 3-(p-EtOC₂H₅), —, red, red, yellow, blue or red; 5,3-MePh, —, —, —, brown, brown; 3,5-Ph(Me₂CH), —, —, —, brown, brown-red; condensation product from I and Bz, Bz, —, —, —, green-yellow, lilac; 5-(PhCH₂), —, —, —, green-yellow, —; 3,5-Me(PhCH₂), gave no colors with metal salts; 5-(p-Me₂NC₂H₄CH₂), gave only red color with AgNO₃; 3,5-Ph(PhCH₂), only gave a green color with CuSO₄; 6-citrylidene, gave only a green-yellow color with AgNO₃; 6-citrylidene-3-phenyl, —, —, yellow, —; 6-AcCH₂CH₂, —, —, —, yellow, brown; 5-(Me₂C), —, —, —, yellow-green, brown; 5-(MePhC), —, —, —, yellow, —; 5-(Ph₂C), —, —, yellow, —; 6-cyclohexylidene, —, —, —, green-yellow, —; 6-cyclohexylidene-3-phenyl, —, brown, —, yellow-brown, —; 5-[Me:(CH₂:CHCH₂)C], —, —, —, yellow, red; 3,5-[Me:(CH₂:CHCH₂)C], —, —, —, brown-yellow, —. The following new rhodanines are reported: shaking an equimolar mixt. of PhNHCS₂NH₂ and Me₂CHCHBrCO₂Na in H₂O gave on acidification 5-isopropyl-3-phenylrhodanine, m. 83-4°. Condensation of α-amino-camphor, CS₂, NH₄OH, and ClCH₂CO₂Na gave a yellow resinous product, but its behavior indicated the structure of a

rhodanine. Condensation of I with urotropine in alc. NaOH soln. gave a yellow condensation product, C₁₁H₁₆O₂N₄S₂, decomp. 230°, which shows 2 acidic H atoms on titration. Nitroprusside reagent in concd. NaOH can be used to detect 3-substituted rhodanines, a blue or violet-blue color being formed if the 5-position is unsubstituted. Tests with pseudohydantoin were made similarly (substituents given, and the metal ions listed in the same order as above): H, —, —, white, brown; 5-PhCH₂, —, —, —, white, —; 3-allyl (chloride), —, —, —, violet-red. Benzylidene-rhodanine phenylhydrazone, brown, brown, —, yellow, —, —. Rhodanine oximes: H, lilac, green, —, white, —; 5-Me, lilac, green, —, white, —; 3-Me, —, —, —, brown; 5-PhCH₂, lilac, green, —, green, —. Na penicillin gave a yellow color with AgNO₃ and brown with nitroprusside and EtONa. 4-Thiazolidinones: 2,3-Ph, gave only a brown color with nitroprusside and EtONa; 5,2,3-MePh, and 5-methyl-thiazolidone gave a red-brown color with FeCl₃ only; 2-Ph-3-5,3,2-Me(HOCH₂CH₂)(HOC₂H₅), and 5,2,3-Me(HOCH₂CH₂)(HOC₂H₅), gave only brown color with nitroprusside and EtONa; 5,3,2-Me(HOCH₂CH₂)(ClC₂H₄) gave the same result. Thiazolidinediones gave no color tests, while its 5-(PhCH₂) deriv. gave only white ppt. with AgNO₃. A red-brown color with FeCl₃ formed with thio-oxazolidone, its 5,5-Me₂, 5,5-MeEt, 5-Ph, 5-(PhCH₂), 5-(PhCH₂:CHCH₂) and 5-anisylidene derivs. White or greenish ppts. with AgNO₃ were obtained with the above derivs. (except 5-methyl-5-ethyl) and with the 5-furfurylidene deriv.; the 5-salicylidene deriv. gave a yellow color with AgNO₃; cherry-red being formed with the 5-(p-Me₂NC₂H₄CH₂) deriv. Thiooxazolidinedione gave a red color with nitroprusside reagent in concd. NaOH; 5,5-Me₂, 5-Ph, and 5-furfurylidene derivs. Heating concd. solns. of NH₄CNS and Cl₂CCO₂H gave yellow xanthanohydrate, or C₁₁H₁₆N₄S₂, whose properties resemble those of pseudothiohydantoin.

G. M. Kosolapoff

USHENKO, N.K.; BARANOV, S.N.; GORIZDRA, T.Ye.

Reaction of oxazolidines with α -mercaptocarboxylic acids. Ukr.
khim.zhur. 20 no.1:64-70 '54. (MLRA 7:3)

1. L'vovskiy gosudarstvennyy meditsinskiy institut, kafedra organi-
cheskoy khimii. (Oxazolidine) (Thioacids)

USHENKO, N. S.

Tobacco

Practices for obtaining abundant harvests of makhorka. Tabak 13, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

USHENKO, S.M., MAKAREVICH-GALPERIN, L.M., (USSR)

"The Action of Natural and Synthetic Oestrogens."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

MAKAREVICH-GAL'PERIN, K.M.; USHENKO, S.M.

Comparative effect of the female sex hormones folliculin and
oestrol on phosphorus metabolism in the brain. Ukr.biokhim.zhur.
28 no.1:79-87 '56. (MLRA 9:7)

1. Farmakoterapevtichnyy vididil Ukrains'kogo institutu eksperimen-
tal'noy endokrinologii, Khar'kiv.
(HORMONES, SEX) (PHOSPHORUS METABOLISM)
(BRAIN)

УШЕНКО С.Н.

Med

2

Influence of castration on certain biochemical processes in animals. L. M. Makarevich-Gal'perin and S. N. Ushenko (Ukrain. Inst. Exptl. Endocrinol., Kharkov). *Problemy Endokrinol. i Gormonoterap.* 2, No. 2, 95-102 (1966).—In the brain of castrated rats there is an accumulation of adenosine-triphosphate, lowering of acid-sol. P, with a simultaneous increase in acid-insol. P (called lipoid P) and of total P. Acid-sol. P increases in lungs, remains unchanged elsewhere. Total P increases in kidneys and spleen, decreases in heart, liver, and lungs; muscles remain unaffected. Lipoid P accumulates in kidneys and spleen, decreases in lungs, liver, and heart. The size of the spleen markedly decreases in castrated females. —L. A. Stekol

USHENKO, S.N.

MAKAREVICH-GAL'PERIN, L.M., prof.; USHENKO, S.N. (Khar'kov)

Comparative evaluation of the effect of folliculin and octestrol on the glycogen level in the liver in ovariectomized rats [with summary in English, p.124]. Probl.endok. i gorm. 3 no.4:16-21 (MIRA 10:12) JI-Ag '57.

1. Iz farmako-terapevticheskogo otdela Ukrainskogo instituta eksperimental'noy endokrinologii (dir. - kandidat meditsinskikh nauk S.V.Maksimov)

(ESTROGENS, effects,

on liver glycogen in ovariectomized rats, comparison of various prep. (Rus))

(LIVER, metabolism,

glycogen in ovariectomized rats, eff. of various estrogens (Rus))

(GLYCOGEN, metabolism,

liver, in ovariectomized rats, eff. of various estrogens (Rus))

(CASTRATION, effects,

on liver glycogen in female rats, eff. of various estrogens (Rus))

MAKAREVICH-GAL'PERIN, L.M. [Makarevych-Hal'perin, L.M.] USHENKO, SN.
BRESLAVSKIY, A.S. [Breslavs'kyi, A.S.]

Some problems concerning the reaction of the organisms to the
effect of thyreostatic compounds [with summary in English].
Ukr. biokhim. zhur. 30 no.5:678-687 '58 (MIRA 11:12)

1. Otdel farmakoterapii i gistofiziologii Ukrainanskogo instituta
eksperimental'noy endokrinologii, Khar'kov.
(POTASSIUM PERCHLORATE--PHYSIOLOGICAL EFFECT)
(LIVER)
(SPLEEN)

USHENKO, S.N.

Effect of folliculin and octectron on conditioned reflex activity
in white rats. Probl. endok. i gorm, 6 no. 2:37-42 Mr-Ap '60.
(MIRA 14:1)

(CONDITIONED RESPONSE) (ESTROGENS)

GENES, S.G.; MAKAREVICH-GAL'PERIN, L.M.; USHENKO, S.N.

Effect of butamide, cyclamide, chlorcyclamide and chlorpropamide
on the glycogen content of various tissues. Vop.med.khim. 6 no.5:
469-474 S-0 '60. (MIRA 14:1)

1. The Ukrainian Institute of Experimental Endocrinology, Kharkov.
(DIABETES) (GLYCOGEN)

GENES, S.G.; MAKAREVICH-GAL'PERIN, L.M.; USHENKO, S.N.

Effect of cyclamide, chlorcyclamide, chlorpropamide, and butamide
on the blood sugar level in rats. Farm.i toks. 23 no.6:535-539
N-D '60. (MIRA 14:3)

1. Ukrainskiy institut eksperimental'noy endokrinologii, Khar'kov.
(BLOOD SUGAR)

MAKAROVICH-GAL'PERIN, L.M. [Makarevych-Hal'perin, L.M.]; USHENKO, S.N.

Dynamics of changes in the glycogen content of the liver and uterus in ovariectomized rats due to the effect of folliculin and octestrol. Ukr.biokhim.zhur. 32 no.3:404-411 '60.

(MIRA 13:6)

1. Ukrainian Institute of Experimental Endocrinology, Kharkov.
(ESTROGENS) (LIVER--GLYCOGENIC FUNCTION) (UTERUS)

USHENKO, S. N., GEMES, S. G., and MAKAREVICH-GALPERIN, L. M. (USSR)

"The Effect of Antidiabetic Sulphonamides on the Glycogen Content
in the Rat Liver and Muscles in Various Conditions."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

GENES, S.G.; MAKAREVICH-GAL'PERIN, L.M.; USHENKO, S.N.

Glycogen content of the liver and muscles in rats in relation to time following administration of chlorpropamide and the duration of starvation. Biul. eksp. biol. i med. 52 no.7:65-68 JI '61. (MIRA 15:3)

1. Iz Ukrainского instituta eksperimental'noy endokrinologii (direktor - kand.med.nauk S.V. Maksimov), Khar'kov. Predstavlena deystvitel'nym chlenom ANU SSSR V.V. Parinym.
(GLYCOGEN) (LIVER) (MUSCLES)
(PROPIONAMIDE) (STARVATION)

USHENKO, S.N.

Changes in the conditioned reflex activity of white rats under the influence of ovariectomy and the administration of estrogens. Trudy Ukr.nauch.-issl.inst.eksper.endok. 18:303-309 '61. (MIRA 16:1)

1. Iz otdela farmakoterapii Ukrainского instituta eksperimental'noy endokrinologii. (CONDITIONED RESPONSE) (ESTROGENS) (SPAYING)

USHENKO, S.N.

Materials from a comparative study of the mechanism of the
action of natural and synthetic estrogens. Trudy Ukr.nauch.-
issl.inst.eksper.endok. 18:284-297 '61. (MIRA 16:1)
(ESTROGENS)(GLYCOGEN)

MAKAREVICH-GAL'FERIN, L.M.; USHENKO, S.N.; SHUKLOVSKAYA, L.G.

Comparative study of the specific and nonspecific action of new
mono- and diesters of estradiol. Pharm. i toks. 25 no. 11-12-1982
J1-Ag '62. (MIRA 17:10)

1. Ukrainskiy institut eksperimental'noy endokrinologii, Khar'kov.

MAKAREVICH-GAL'PERIN, L.M. [Makarevych, Hal'perin, L.M.]; USHENKO, S.N.

Effect of estrogens in the organism of ovariectomized animals
on certain enzymes of carbohydrate metabolism. Ukr. biokhim.
zhur. 34 no.2:245-252 '62. (MIRA 16:11)

1. Ukrainian Institute of Experimental Endocrinology, Kharkov.

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MAKAREVICH-GAL'PERIN, L.M.; USHENKO, S.N.

Comparative study of the effect of estrogens of the stilbene group
on some processes occurring in the organism of ovariectomized rats.
Trudy Ukr. nauch.-issl. inst. eksper. endok. 19:299-310 '64.

(MIRA 18:7)

1. Iz otdela farmakoterapii Ukrainakogo instituta eksperimental'noy
endokrinologii.

MAKAREVICH-GAL'PERIN, L.M. [Makarevych-Hal'perin, L.M.]; USHENKO, S.N.

Role of esterification on the action of estradiol and diethylstilbestrol on ovariectomized rats. Ukr. biokhim. zhur. 36 no.2:234-242 '64. (MIRA 17:11)

1. Ukrainian Institute for Experimental Endocrinology, Kharkov.

MAKAREVICH-GAL'PERIN, L.M.; USHENKO, S.N.; VOLOVEL'SKIY, L.N.; SELICHENKO,
A.G.; SHMUKLOVSKAYA, L.G.

Comparative study of the glycogen content in the liver and uterus under
the influence of estrogens of antitubercular action. Trudy Ukr. nauch.-issl.
inst. eksper. endok. 19:353-368 '64. (MIRA 18:7)

1. Iz otdela farmakoterapii Ukrainskogo instituta eksperimental'noy
endokrinologii.

FAYNBERG, A.I.; REZNIK, A.I.; GVOZDEV, A.M.; FILATOV, N.L.;
USHENKO, V.S., red.; SALAZKOV, N.P., tekhn. red.

[Problems on the methodology for planned calculations and
analysis of administrative operations in communal housing and
services]Sbornik zadach po metodike planovykh raschetov i ana-
lizu khoziaistvennoi deiatel'nosti v kommunal'nom khoziaistve.
[By] A.I.Fainberg i dr. Moskva, Izd-vo M-va kommun. khoz.
RSFSR, 1962. 233 p. (MIRA 15:12)
(Housing management--Accounting)
(Municipal services--Accounting)

USHENKO, Yu. (Prof.)

Dyes and Dyeing

278 -Epoxythiacarbocyanines. Part I. Zhur. ob. khim., 22 (84), No. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, October 1952 ~~1953~~, Uncl.

USHERENKO, A.; SHUKHGALTER, Ye.M., inzh.-tekhnolog

Efficient method for home preparation of tomato puree. Kons.
i ov.prom. 14 no.12:42 D '59. (MIRA 13:3)

1. Glavnyy inzhener Adygeyskogo konservnogo kombinata (for
Usherenko). (Tomatoes, Canned)

USHERENKO, A.A.; SHUKHGALTER, Ye.M.

Method of cooking tomato pulp eliminating its sticking to
the heated surface. Kons.i ov.prom. 15 no.2:12-13 F '60.
(MIRA 13:5)

1. Adygeyskiy konservnyy kombinat.
(Tomato products)

USHARENKO, A.I

112-4-7645

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957, Nr 4,
p. 15 (USSR)

AUTHORS: Gul'ko, F.B., Usherenko, A.I.

TITLE: More on the Problem of Determining the Specific
Inductive Capacitance of Solid Dielectrics (K voprosu
opredeleniya dielektricheskoy pronitsayemosti tverdykh
dielektrikov)

PERIODICAL: Sb. statey nauch.-stud. o-va Mosk. energ. in-ta, 1956,
Nr 9, pp. 152-162

ABSTRACT: The analysis of formulae for calculating the specific
inductive capacitance ϵ from the capacity of the
sample between two disc electrodes is given. These
formulae, based on the calculation of the edge capacitance
are given in various studies and tables of standards. It
has been demonstrated that certain of these formulae are
inaccurate and admit an error of from five to six per cent.

Card 1/2

112-4-7645
More on the Problem of Determining the Specific Inductive (Cont.)

The optimum ratios between the thickness and diameter of the sample and the diameter of the electrodes have been calculated. Formulae for calculating the edge capacitance of the different variants of disc electrodes (electrodes with partially or completely covered disc surfaces) have been derived. In agreement with experimental data, these formulae give an error when calculating ϵ of not more than one per cent. M.D.M.

Card 2/2

USHERENKO, Kh.I.

Obtaining a polyvalent antigangrene serum. Trudy Tom NIIVS
12:195-198 '60 (MIRA 16:11)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i sy-
vorotok.

*

U) H E R E N K O, M. P.

REZNIK, K.I.; USHERENKO, M.P.; BARANOVSKIY, M., redaktor; TRUKHANOVA, A.,
tekhnicheskii redaktor

[New developments in the technology of pattern making; work practices
of the pattern-making shop at the Minsk Tractor Plant)] Novoe v
tekhologii izgotovleniia model'noi osnastki. (Iz opyta raboty model'
nogo tsekha Minskogo traktornogo zavoda). Minsk, Gos. izd-vo BSSR,
1954. 28 p. (MLRA 8:4)

(Patternmaking)

KONSTANTINOPOL'SKIY, I.; SVIDERSKIY, Ya., redaktor; USHAKOVKO, N., redaktor;
LEBEDEV, A., tekhnicheskiy redaktor.

[Our practice in handling government revenue] Nash opyt po gosudar-
stvennym dokhodam. Moskva, Gosfinizdat, 1955. 81 p. (MLRA 9:5)

1. Nachal'nik sektora gosdokhodov Sokol'nicheskogo rayfinotdela g.
Moskvy (for Konstantinopol'skiy).
(Revenue)

SMIRNOV, P.; USHERENKO, N.

Study and introduce progressive practices. Fin. SSSR 17 no.12:
45-48 D '56. (MLRA 10:1)

(Sandovo District--Finance)

USHERENKO, N.I.; LYCHKOVSKAYA, Ye.V.

Results of isolating and typing the poliomyelitis virus in HeLa cells in Odessa. Vop. virus. 5 no. 1:25-26 Ja-F '60.

(MIRA 14:4)

1. Odesskiy institut epidemiologii i mikrobiologii imeni I.I. Mechnikova.

(ODESSA—POLIOMYELITIS)

USHCHENKO, M.M.

VASHCHINSKIY, Gordey Vasil'yevich; USHCHENKO, M.M., redaktor; PEVZNER, V.I.
tekhnicheskii redaktor; BALLOD, A.I., tekhnicheskii redaktor

[Accounting in agricultural enterprises] Bukhgalterskii uchet v
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sel'khoz. lit-ry, 1956. 350 p. (MLRA 10:4)
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VASIL'YEV, Georgiy Vasil'yevich; IVANOV, Anatoliy Ivanovich;
USHERENKO, R.M., red.

[The big Magnitka] Bol'shaya Magnitka. Cheliabinsk,
Iuzhno-Ural'skoe knizhnoe izd-vo, 1964. 125 p.
(MIRA 18:8)

GAGARIN, Petr Ivanovich; USHETENKO, K.M., red.

[Metallurgist, innovator; a sketch] Metallurg-novator;
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14 p. (MIRA 17:8)

MAKAREVICH-GAKPERIN, L.M., prof.; USHENKO, S.N., nauchnyy sotrudnik
(Khar'kov)

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mental'noy endokrinologii (dir. - kand.med.nauk S.V. Maksimov).

(CASTRATION, effects,
on liver glycogen & weight of various organs in
female rats (Rus))

(LIVER, metab.
glycogen, eff. of ovariectomy in rats (Rus))

(GLYCOGEN, metab.
liver, eff. of ovariectomy in rats (Rus))

GORSHKOV, M.I.; ZINOV'YEV, V.R.; TOPLIN, A.I.; USHERENKO, Z.I.

Cutting surfaced veneer with planer saws. Der.prom. 5 no.8:3-4
Ag '56. (MLRA 9:10)
(Veneers and veneering) (Planing machines)

USHARENKO, Z.I., inzhener.

Joining furniture parts with inserted round dowel-pins. Der. prez. 6
no.5:23 My. '57. (MLRA 10:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut fanery i mebeli.
(Furniture industry) (Joinery)

KONDRASHKIN, Ye.P., kand. tekhn. nauk; USHERENKO, Z.I., inzh.

Furniture manufactured from bent and glued parts and units.
Der. prom. 8 no.8:1-4 Ag '59. (MIRA 12:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut fanery i mebeli.
(Furniture industry)

USHERENKO, Z.I.; SLUTSKIY, S.M., red.; SHELUDCHENKO, Ye.M., red.;
SHENDAREVA, L.V., ~~red.~~ red.

[Manufacture of furniture with glued bent parts]Proizvodstvo
mebeli iz gnuto-kleenykh detalei. Moskva, TS~~entr.~~ in-t
tekhn. informatsii i ekon. issl. lesnoi, bumazhnoi i derevo
obrabatyvalushchei promyshl., 1962. 55 p. (MIRA 16:1)
(Furniture)

MOROZOV, N.A., kand. tekhn. nauk; USHERENKO, Z.I., inzh.

Automatic line for collecting bundles. Der. prom. 11 no.7;
5-6 JI '62. (MIRA 17:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut fanery i
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inzh.

Semiautomatic line for machining bent and glued parts in the
manufacture of furniture. Mekh.i avtom.proizv. 16 no.8:10-14
Ag '62. (MIRA 15:9)
(Furniture industry)

MOROZOV, Nikolay Aleksandrovich, kand. tekhn. nauk; USHERENKO,
Zinoviy Izrailevich, inzh.; SLUTSKIY, S.B., red.; BOYKO,
L.I., red.izd-va; KAZANSKAYA, L.I., tekhn. red.

[Manufacture of bent and glued furniture] Proizvodstvo
gmutokleenoj mebeli. Moskva, Goslesbumizdat, 1963. 178 p.
(MIRA 17:1)

MOROZOV, N.A., kand.tekhn.mauk; USHERENKO, Z.I., inzh.

Cooperative production of plywood and bent-glued pieces for
furniture. Der. prom. 12 no.4:9 Ap '63. (MIRA 16:10)

USHERENKO, Z.I., inzh.

Technology of the production of bent-glue^d furniture parts. Der.
prom. 12 no.6:3-5 Je '63. (MIRA 16:10)

MOROZOV, N.A., kand. tekhn. nauk; USHERENKO, Z.I., inzh.; CHAYKOVSKIY,
I.Ye., inzh.

New machines for manufacturing bent and glued furniture parts.
Mekh. i avtom. proizvod. 18 no.1:18-23 Ja '64. (MIRA 17:8)

MOVCHANOVA, Lyubov' Konstantinovna; USHEROVA, Yekaterina Andreyevna

[Home care for patients with internal diseases] Ukhod za
bol'nymi na doma pri zabolevaniakh vnutrennikh organov. Lenin-
grad, Medgiz, 1959. 31 p. (MIRA 13:9)
(MEDICINE, INTERNAL) (HOME NURSING)

MOVCHANOVA, Lyubov' Konstantinovna; USHEROVA, Yekaterina Andreyevna;
OGLY, I.A., red.; LEBEDEVA, G.T., tekhn. red.

[Home care of patients suffering from diseases of internal
organs]Ukhod za bol'nymi na domu pri zabolevaniakh vnutren-
nykh organov. 2., izd. Leningrad, Medgiz, 1963. 31 p.
(MIRA 16:3)

(VISCERA--DISEASES) (HOME NURSING)

USHEROV-MARSHAK, V.E., inzhener.

Experience in use of spot welding of bars for reinforced concrete elements. Stroi.prom.32 no.11:24-25 N '54. (MLRA 7:11)

1. Ural'skiy filial Tsentral'nogo nauchno-issledovatel'skogo instituta promyshlennykh sooruzheniy.
(Reinforced concrete construction)

135-58-1-13/23

AUTHOR: Usherov-Marshak, V. E., Engineer, (Deceased)

TITLE: Electrodes and Bits of Copper Alloys for Contact Welding
(Elektrody i gubki iz splavov medi dlya kontaktnoy svarki)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 1, pp 32 - 34 (USSR)

ABSTRACT: The increased application of contact welding in the Soviet Union entails growing expenses of copper, necessary for the production of electrodes, rolls and bits for contact machines. The low stability of copper, utilized for this purpose, necessitates its replacement by copper alloys, which have better physical and mechanical properties. Professor M.V. Zkharov composed various alloys such as MTs-2, MTs-4, MTs-5B, etc. which recently came into use. The author used some alloys of this group for comparative tests (Table 1). As a rule, electrode alloys have to be subjected to thermal treatment which increases their hardness and electric conductivity. The results of tests of contact machine electrodes applied in the welding of concrete reinforcements are given in table 2, which shows the high quality of electrodes made of the MTs-4 alloy with thermal treatment. There are 2 tables, 2 figures and 2 photos.

Card 1/2

Electrodes and Bits of Copper Alloys for Contact Welding 135-58-1-13/23

ASSOCIATION: Sverdlovskiy filial VNIIPS (The Sverdlovsk VNIIPS Branch)

AVAILABLE: Library of Congress

Card 2/2

1. Electrodes-Production alloys-Application
2. Electrodes-Conductivity
3. Copper

MCHEDLOV-PETROSYAN, O.P.; USHEROV-MARSHAK, A.V.; FILATOV, L.G.;
DOLZHENKOV, I.P.; ~~SALENKOV, Yu.S.~~

Quick-hardening expanding compositions on a portland cement
base for large-panel house building. Stroi.mat. 9 no.11:
34-36 N '63. (MIRA 17:4)

USHEV, Anton (Narodnaya Respublika Bolgariya)

Medet. copper-molybdenum deposit in the People's Republic of
Bulgaria. Razved. i okh. nedr 39 no.4:01-63 Ap '64.

(MIRA 17:12)

USHEV, Iv.; PESHEV, Iv.

Gastric and duodenal diverticula. Suvrem. med. Sofia 5 no.5:101-105 1954.

1. Iz Katedrata po rentgenologia pri Meditsinskata akademija V.Chervenkov, Sofia (zav.: prof. A.Nikolaev)
(STOMACH, diverticula,)
(DUODENUM, diverticula,)
(DIVERTICULOSIS,
duodenum & stomach)

USHEV, Iv.

Case of mesenterium ileocolicum commune associated with
duodenal ulcer. Khirurgia, Sofia 9 no.6:542-544 1956.

1. Iz Katedrata po rentgenologija pri VMI--Sofia).
(MESENTERIES, abnormalities,
common ileocolic mesentery in duodenal peptic ulcer (Bul))
(PEPTIC ULCER, complications,
common ileocolic mesentery (Bul))

TOLEV, Iv.; ~~JOHEV, L.~~; KOEV, A.; CHANG, Y. H.

Clinical and roentgenological observations in syphilis with osseous manifestation. Suvrem. med., Sofia 8 no.9:35-44 1957.

1. Iz bulgarskata bolnitsa v Koreia gl. lekar: G. Mitrov.
(SYPHILIS, compl.
bone lesions, x-ray diag.)
(BONE DISEASES, etiol. and pathogen.
lesions in syphilis, x-ray diag.)

USHEV, Iv., d-r

Experimental studies on radiation sickness. Nauch. tr. vissh. med.
inst. Sofia 39 no.7:13-18 '60.

1. Predstavena ot prof. A. Nikolaev, rukovoditel na Katedrata po
rentgenologija.

(RADIATION INJURY exper)

TODOROV, V.; USHEV, I.

The protective effect of aesculinic acid against experimentally induced radiation sickness in rabbits. Nauch. tr. vissh. med. inst. Sofia 41 no.4:91-97 '62.

1. Predstavena ot prof. P. Nikolov i ot prof. A. Nikolaev.
(RADIATION PROTECTIVE AGENTS)
(BIOFLAVONOIDS)